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ABSTRACT

This report on federal research and development (R&D) funding has been prepared to meet the need for timely updated data following release of President Reagan's 1985 budget request. These data are presented in tabular and graphic format for three areas: (1) national R&D effort (national R&D expenditures and R&D as a percent of the gross national product--GNP); (2) federal R&D funds (total R&D obligations, R&D obligations by agency, R&D obligations by character of work, basic research by agency, applied research by agency, development by agency, defense and nondefense R&D, defense R&D, defense R&D by character of work, and nondefense R&D by character of work); and (3) federal R&D obligations to universities and colleges (total R&D obligations, R&D obligations by agency, basic research obligations, and basic research obligations by agency). Each table and graph is accompanied by a brief note highlighting the data contained therein. Since data for 1985 are based upon the President's budget request, congressional action could affect funding levels reported here. (JN)

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FEDERAL R&D FUNDING

The 1975 - 85 Decade

Report Prepared by:

NATIONAL SCIENCE FOUNDATION

Directorate for Scientific, Technological, and International Affairs

Division of Science Resources Studies

March 1984

SE 044 743

The Division of Science Resources Studies of the National Science Foundation has prepared this report on Federal R&D funding in order to meet the need for timely updated data following release of the President's 1985 budget request. Since data for 1985 are based upon the President's budget request, congressional action could affect funding levels reported here.

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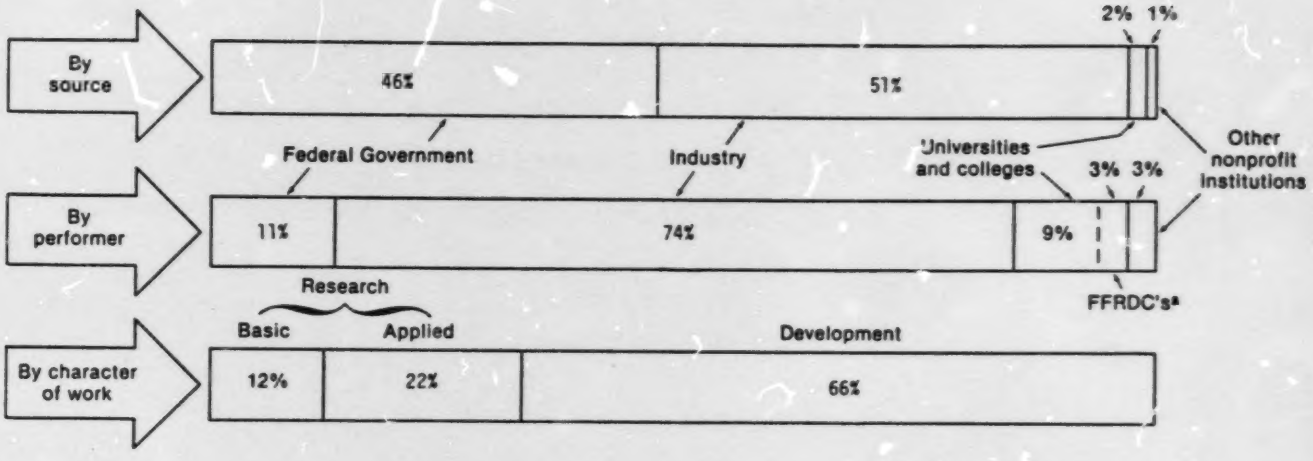
THE NATIONAL R&D EFFORT
1984



o National R&D spending is expected to amount to $97.0 billion in 1984. Industry is expected to be the source of 51 percent of this total, up from 45 percent in 1975, while the Federal government accounts for 46 percent. Industrial R&D funding exceeded that of the Federal government for the first time in 1980.

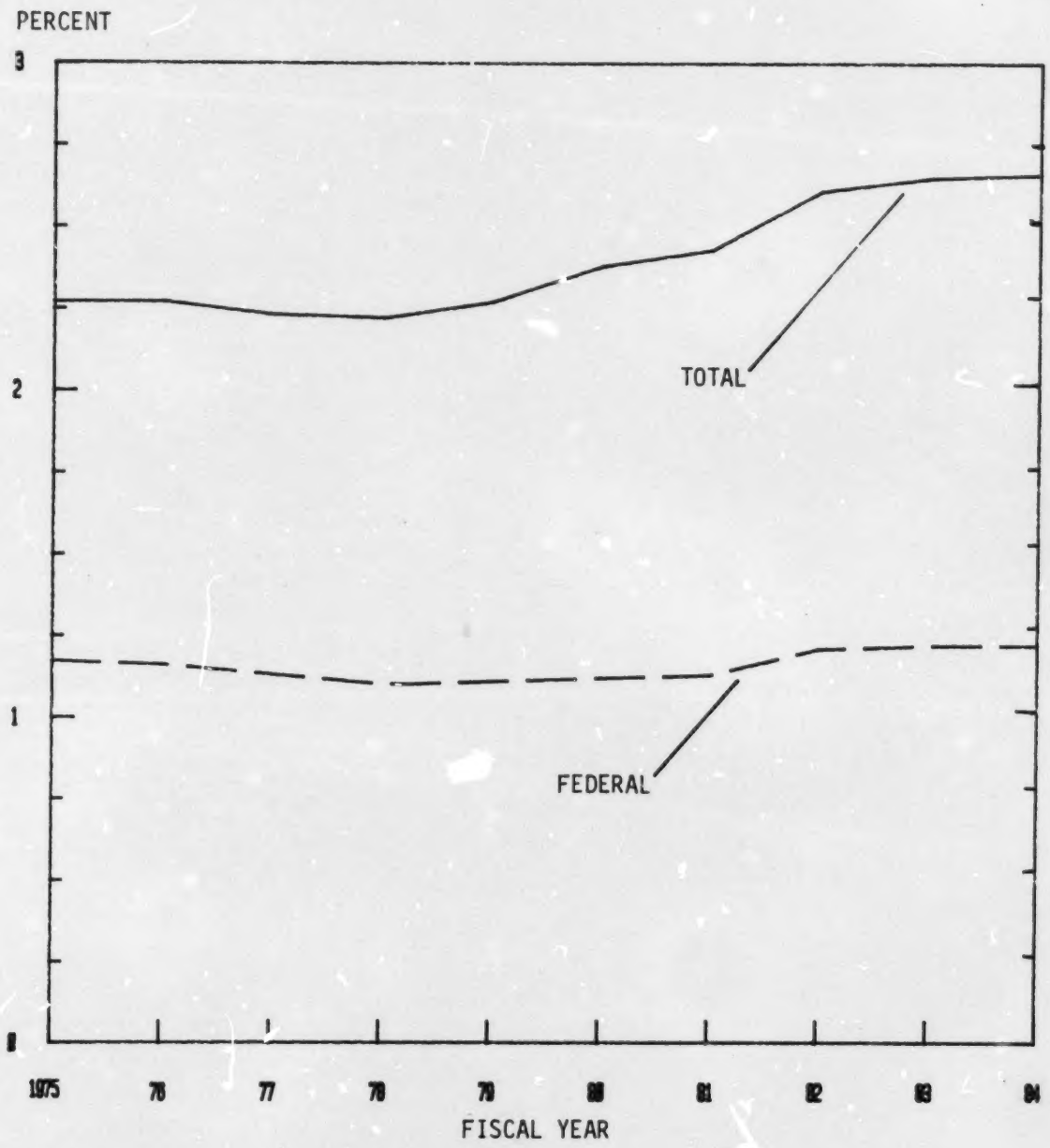
Source: Division of Science Resources Studies, NSF

National expenditures for performance of R&D as a percent of U.S. gross national product

Year	Total	Federal
1975	2.27	1.17
1976	2.27	1.16
1977	2.23	1.13
1978	2.22	1.10
1979	2.27	1.11
1980	2.38	1.12
1981	2.43	1.13
1982	2.61	1.21
1983	2.65	1.22
1984	2.66	1.22

Source: Division of Science Resources Studies, NSF

R&D/GNP



- o National R&D spending is expected to amount to 2.7 percent of the Nation's gross national product in 1984, up from 2.3 percent in 1975. Over this period Federal R&D spending as a percent of the GNP has remained virtually level at 1.2 percent.

Source: Division of Science Resources Studies, NSF

Total Federal R&D obligations: FY 1975-85

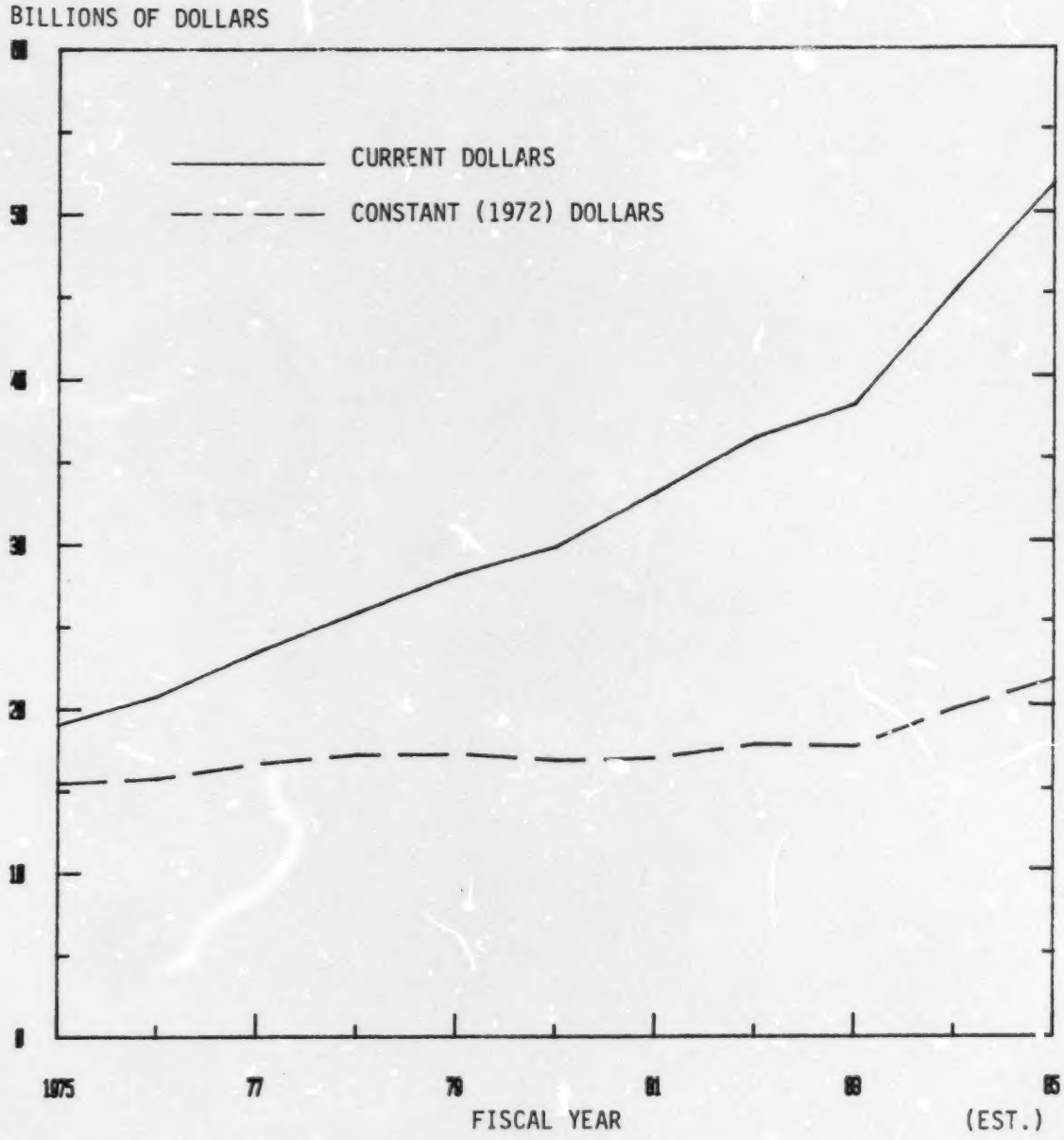
/Dollars in millions/

Fiscal Year	Current dollars	Constant (1972) dollars[1]
1975	$19,039	$15,441
1976	20,780	15,754
1977	23,450	16,655
1978	25,845	17,196
1979	28,145	17,214
1980	29,830	16,796
1981	33,104	16,976
1982	36,433	17,798
1983	38,431	17,645
1984 (est.)	45,280	19,938
1985 (est.)	51,777	21,737

1/ Based on the GNP implicit price deflator for fiscal years 1975-83 with estimates for inflation of 4.4 percent for 1984 and 4.9 percent for 1985.

Source: Division of Science Resources Studies, STIA

TOTAL FEDERAL R&D OBLIGATIONS



- In 1985, Federal R&D obligations are expected to increase by $6.5 billion over FY 1984, or 14 percent. Over the 1975-85 decade, growth in 1985 is second only to the 18 percent increase registered between 1983 and 1984. In constant dollar terms, the 1985 increase of 9 percent continues a growth pattern started in 1984 after flat R&D budgets during the previous eight years.

Source: Division of Science Resources Studies, NSF

Federal R&D obligations by leading support agency: FY 1975-85
/Dollars in millions/

Current dollars

Fiscal year	Total	DOD	DOE	HHS[1/]	NASA	NSF	All other
1975	$19,039	$ 9,012	$2,047	$2,281	$3,064	$595	$2,040
1976	20,780	9,655	2,464	2,461	3,447	609	2,144
1977	23,450	10,963	3,536	2,726	3,171	697	2,357
1978	25,845	11,554	4,245	3,083	3,333	749	2,881
1979	28,145	12,506	4,639	3,505	3,578	808	3,109
1980	29,830	13,981	4,754	3,780	3,234	882	3,199
1981	33,104	16,509	4,918	3,927	3,593	962	3,194
1982	36,433	20,623	4,708	3,941	3,078	975	3,108
1983	38,431	22,925	4,491	4,348	2,570	1,062	3,035
1984 (est.).	45,280	27,636	4,845	4,859	3,257	1,239	3,444
1985 (est.).	51,777	33,852	4,886	4,950	3,341	1,408	3,340

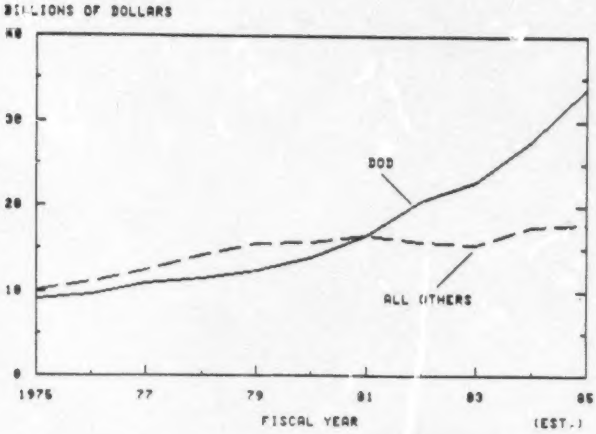
Constant (1972) dollars[2/]

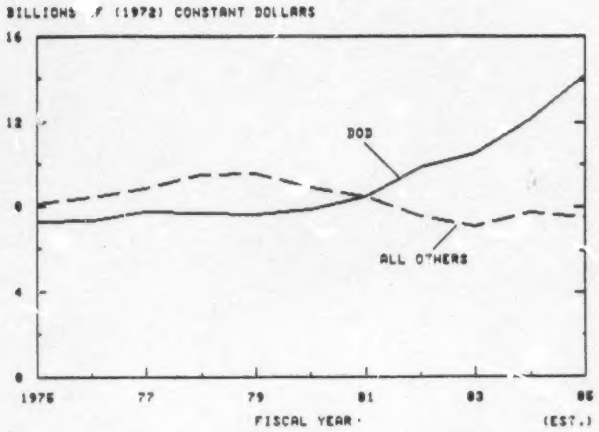
1975	$ 15,441	$ 7,309	$ 1,660	$ 1,850	$ 2,485	$ 483	$ 1,655
1976	15,754	7,320	1,868	1,866	2,613	462	1,625
1977	16,655	7,786	2,511	1,936	2,252	495	1,674
1978	17,196	7,687	2,824	2,051	2,218	498	1,917
1979	17,214	7,649	2,837	2,144	2,188	494	1,902
1980	16,796	7,872	2,677	2,128	1,821	497	1,801
1981	16,976	8,466	2,522	2,014	1,843	493	1,638
1982	17,449	9,877	2,255	1,887	1,474	467	1,489
1983	17,645	10,526	2,062	1,996	1,180	488	1,393
1984 (est.).	19,938	12,169	2,133	2,140	1,434	546	1,517
1985 (est.).	21,737	14,212	2,051	2,078	1,403	591	1,402

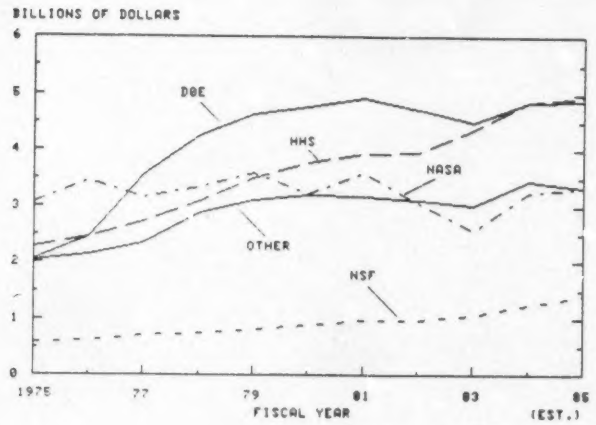
1/ Prior to 1979 HEW data were used minus data for the Office of Education, National Institute of Education, and Assistant Secretary for Education (HEW).
2/ Based on the GNP implicit price deflator for fiscal years 1975-83 with estimates for inflation of 4.4 percent for 1984 and 4.9 percent for 1985.

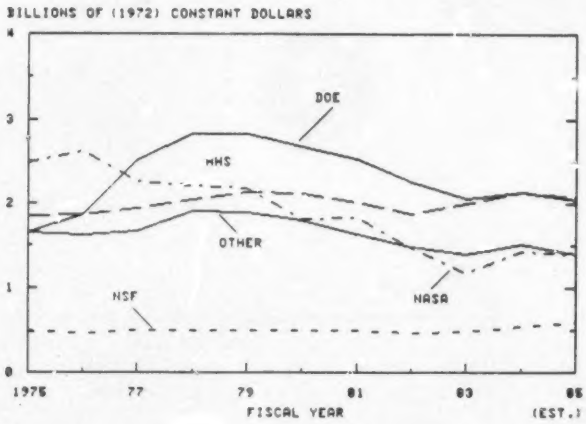
Source: Division of Science Resources Studies/STIA

FEDERAL R&D OBLIGATIONS BY LEADING SUPPORT AGENCY









- The Department of Defense, with an estimated 22 percent increase in 1985 R&D obligations, advances more than any other agency, followed by NSF with growth of 14 percent. Over the 1975-85 decade most of the growth experienced by DOD has occurred in the latter half.

Source: Division of Science Resources Studies, NSF

Federal R&D obligations by character of work: FY 1975-85

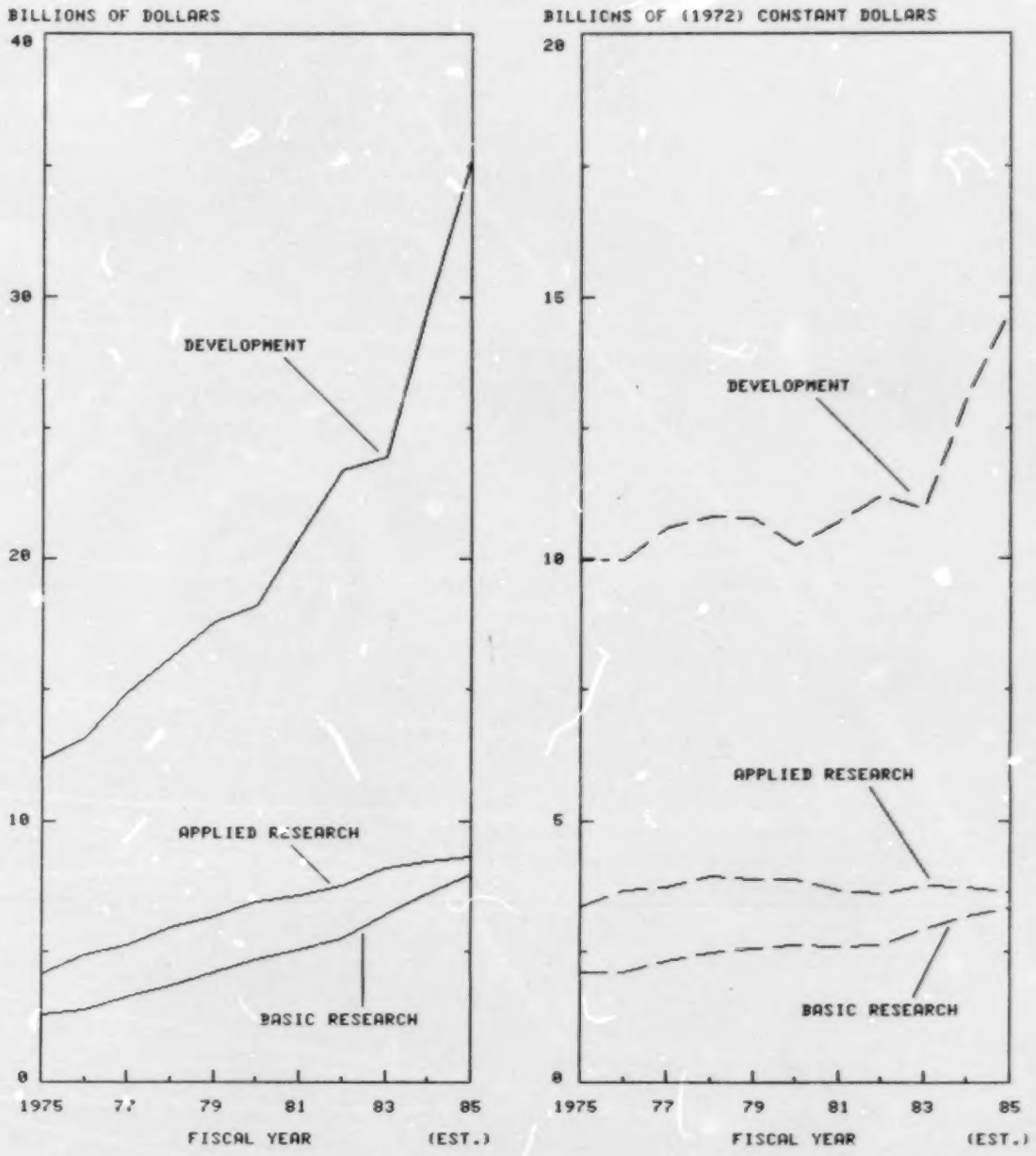
[Dollars in millions]

Character of work	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984(est)	1985(est)
Current dollars											
R&D total	$19,039	$20,780	$23,450	$25,845	$28,145	$29,830	$33,104	$36,433	$38,431	$45,280	$51,777
Basic research	2,588	2,767	3,259	3,699	4,193	4,674	5,041	5,482	6,383	7,193	7,925
Applied research	4,141	4,852	5,255	5,908	6,342	6,523	7,171	7,541	8,169	8,452	8,641
Development	12,309	13,160	14,936	16,238	17,610	18,233	20,891	23,410	23,879	29,636	35,210
Constant (1972) dollars[1]											
R&D total	$15,441	$15,754	$16,655	$17,196	$17,214	$16,796	$16,976	$17,449	$17,645	$19,938	$21,737
Basic research	2,099	2,098	2,314	2,461	2,564	2,632	2,585	2,625	2,931	3,167	3,327
Applied research	3,359	3,678	3,733	3,931	3,879	3,898	3,678	3,612	3,751	3,722	3,628
Development	9,983	9,978	10,608	10,804	10,771	10,266	10,713	11,212	10,964	13,050	14,782

1/ Based on the GNP implicit price deflator for fiscal years 1975-83 with estimates for inflation of 4.4 percent for fiscal year 1984 and 4.9 percent for fiscal year 1985.

Source: Division of Science Resources Studies/STIA

FEDERAL R&D OBLIGATIONS BY CHARACTER OF WORK



- The 1985 budget continues past trends in that highest growth rates (19%) are shown for development followed by basic research (10%) and applied research (2%). After having remained essentially level in constant dollar terms, development support has increased sharply over the last two years (16% per year). However, applied research funding has remained level over the whole 1975-85 decade. Basic research support has grown steadily with more acceleration during the 1982-85 period.

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Source: Division of Science Resources Studies, NSF

Federal obligations for basic research by leading support agency: FY 1975-85

/Dollars in millions/

Current dollars

Fiscal year	Total	HHS[1]	NSF	DOE	DOD	NASA	USDA	All other
1975	$2,588	$ 902	$ 486	$ 313	$ 300	$ 309	$ 154	$ 124
1976	2,767	981	524	346	327	293	171	125
1977	3,259	1,108	625	389	373	414	204	146
1978	3,699	1,274	678	441	410	480	243	173
1979	4,193	1,576	733	463	472	513	256	180
1980	4,674	1,763	815	523	540	559	276	198
1981	5,041	1,900	897	586	604	531	314	209
1982	5,482	2,145	916	642	687	536	331	225
1983	6,383	2,473	1,000	912	784	615	362	237
1984 (est.).	7,193	2,783	1,173	1,039	815	714	387	282
1985 (est.).	7,925	2,914	1,330	1,230	939	828	420	264

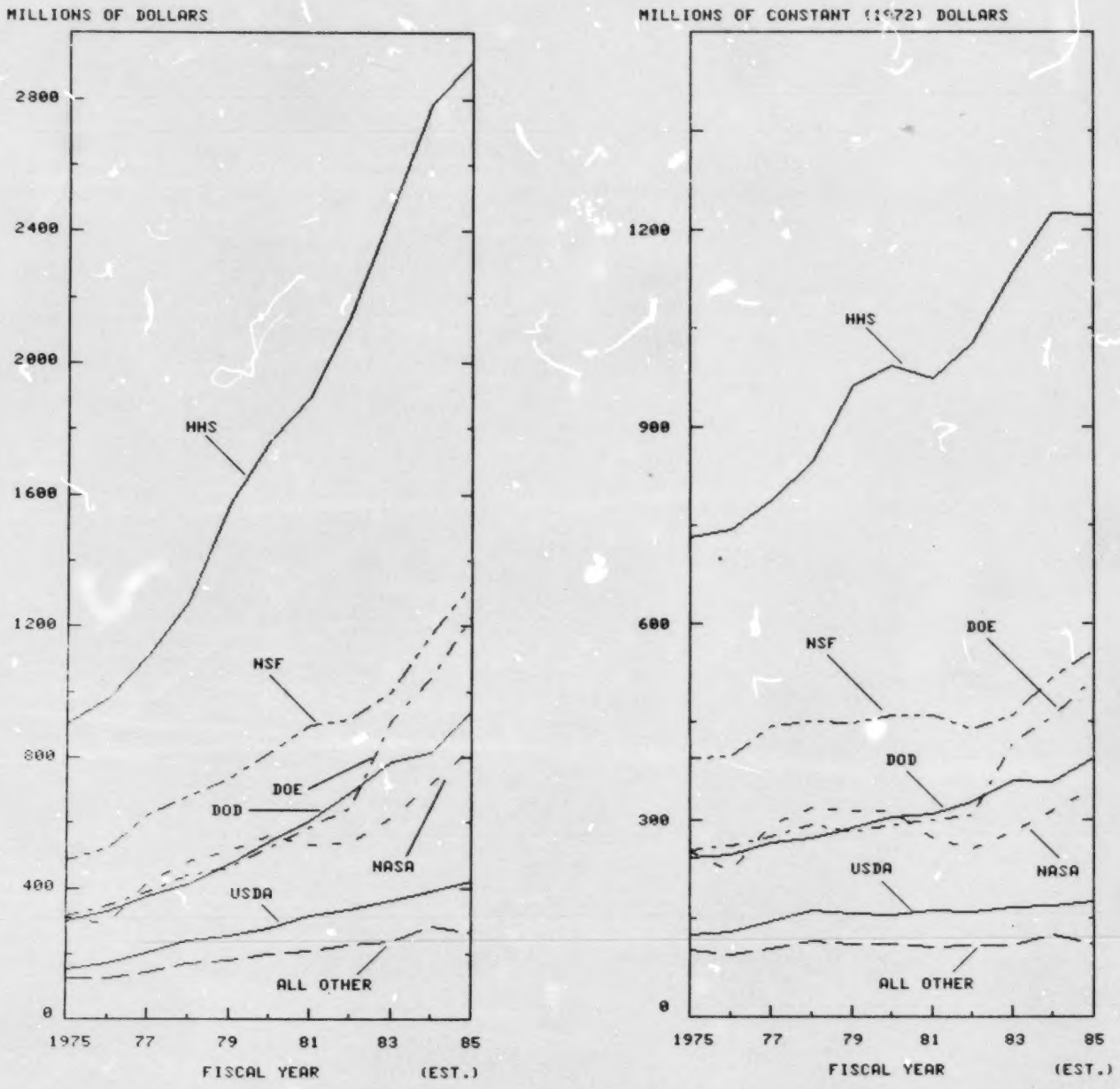
Constant (1972) dollars[2]

1975	$2,099	$ 732	$ 394	$ 254	$ 243	$ 251	$ 125	$ 101
1976	2,098	744	397	262	248	222	130	95
1977	2,314	787	444	276	265	294	145	104
1978	2,461	848	451	293	273	319	162	115
1979	2,564	964	448	283	289	314	157	110
1980	2,632	993	459	294	304	315	155	111
1981	2,585	974	460	301	310	272	161	107
1982	2,625	1,027	439	307	329	257	159	108
1983	2,931	1,135	459	419	360	282	166	109
1984 (est.).	3,167	1,225	517	458	359	314	170	124
1985 (est.).	3,327	1,223	558	516	394	348	176	111

1/ Prior to 1979 HEW data were used minus data for the Office of Education, National Institute of Education, and Assistant Secretary for Education (HEW).
2/ Based on the GNP implicit price deflator for fiscal years 1975-83 with estimates for inflation of 4.4 percent for 1984 and 4.9 percent for 1985.

Source: Division of Science Resources Studies/STIA

FEDERAL OBLIGATIONS FOR BASIC RESEARCH, BY LEADING SUPPORT AGENCY



- The leading supporter of basic research continues to be HHS which is, however, slowing down in 1985 after significant increases since 1975. All other agencies show constant dollar increases for 1985, continuing a pattern that started in 1983. DOE support for basic research shows the largest relative gain of the leading agencies--18 percent--mostly for research in high energy and nuclear physics and basic energy sciences.

Source: Division of Science Resources Studies, NSF

Federal obligations for applied research, by leading support agency: FY 1975-85

/Dollars in millions/

Current dollars

Fiscal year	Total	DOD	HHS[1]	DOE	NASA	USDA	All others
1975	$4,141.3	$1,130.9	$1,021.1	$ 280.7	$ 625.8	$ 247.8	$ 835.0
1976	4,851.9	1,200.6	1,164.6	400.7	929.6	270.9	885.5
1977	5,255.5	1,342.6	1,294.8	501.8	792.3	319.6	1,004.4
1978	5,908.2	1,413.6	1,448.4	661.7	865.4	351.8	1,167.3
1979	6,342.3	1,542.6	1,439.7	668.9	938.4	375.5	1,377.2
1980	6,923.2	1,721.4	1,570.1	754.2	1,050.5	381.8	1,445.2
1981	7,171.5	1,996.6	1,591.9	827.3	876.0	426.9	1,452.8
1982	7,540.6	2,266.1	1,460.9	1,053.9	871.4	435.7	1,452.6
1983	8,169.2	2,407.4	1,547.3	1,459.0	904.0	453.3	1,398.2
1984 (est.)	8,452.1	2,150.1	1,716.5	1,546.0	1,070.7	454.7	1,514.1
1985 (est.)	8,641.0	2,372.5	1,688.0	1,632.0	1,102.8	449.5	1,396.2

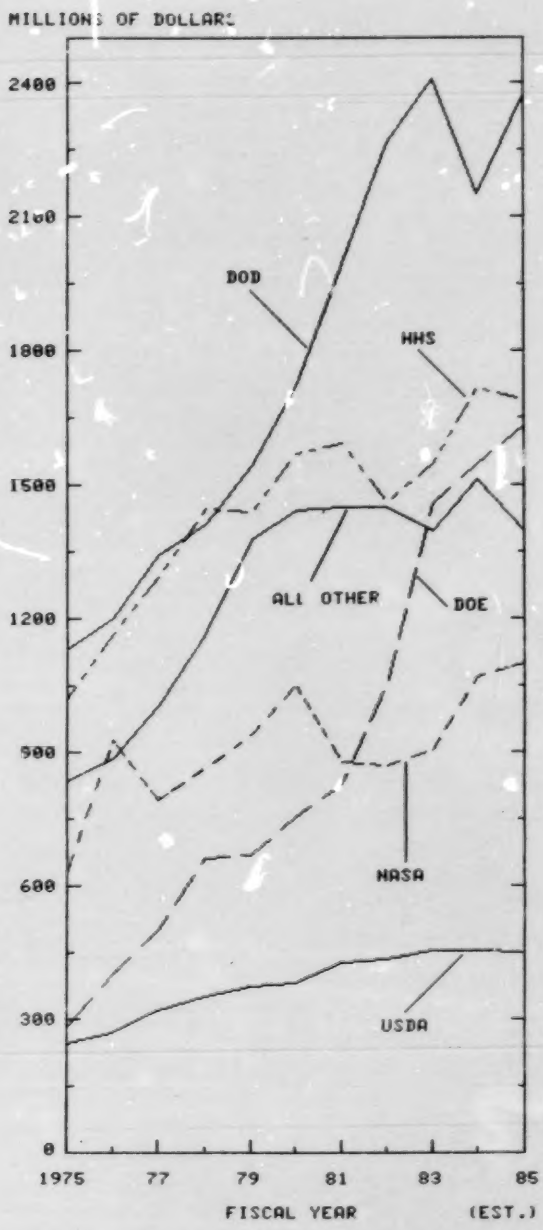
Constant (1972) dollars[2]

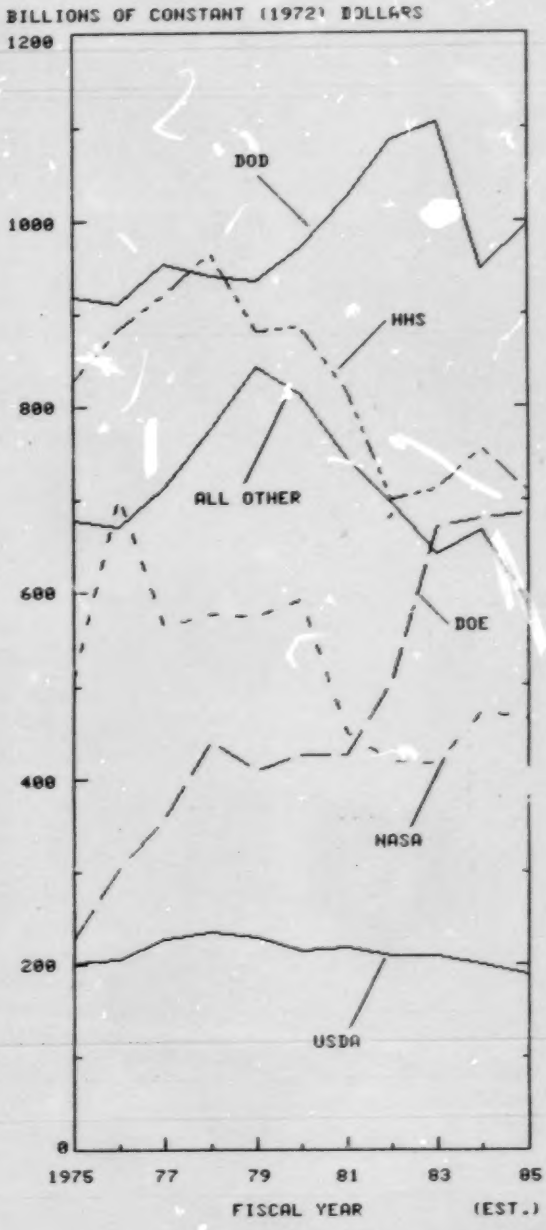
1975	$3,358.7	$ 917.2	$ 828.1	$ 227.7	$ 507.5	$ 201.0	$ 677.2
1976	3,678.5	910.2	882.9	303.8	704.8	205.4	671.3
1977	3,732.6	953.6	919.6	356.4	562.7	227.0	713.4
1978	3,930.9	940.5	963.7	440.3	575.8	234.1	776.6
1979	3,879.1	943.5	880.6	409.1	573.9	229.7	842.3
1980	3,898.2	969.3	884.1	424.7	591.5	215.0	813.7
1981	3,677.7	1,023.9	816.4	424.3	449.2	218.9	745.0
1982	3,611.4	1,085.3	699.7	504.7	417.3	208.7	695.7
1983	3,750.8	1,105.3	710.4	669.9	415.1	208.1	642.0
1984 (est.)	3,721.8	946.8	755.8	680.8	471.5	200.2	666.7
1985 (est.)	3,627.6	996.0	708.6	685.1	463.0	188.7	586.1

1/ Prior to 1979 HEW data were used minus data for the Office of Education, National Institute of Education, and Assistant Secretary for Education (HEW).
2/ Based on the GNP implicit price deflator for fiscal years 1975-83 with estimates for inflation of 4.4 percent for 1984 and 4.9 percent for 1985.

Source: Division of Science Resources Studies/STIA

FEDERAL OBLIGATIONS FOR APPLIED RESEARCH, BY LEADING SUPPORT AGENCY





- 1985 applied research obligations for almost all agencies slowed down from rates of growth experienced in previous years. The only exception is DOD, which experienced a dip in 1984 due to the onset of a new development program dealing with the experimental evaluation of major innovative technologies. This activity replaced certain applied research programs.

Source: Division of Science Resources Studies, NSF

Federal obligations for development, by leading support agency: FY 1975-85

/Dollars in millions/

Current dollars

Fiscal year	Total	DOD	DOE	NASA	All other
1975	$12,309	$ 7,581	$1,454	$ 2,129	$ 1,145
1976	13,160	8,127	1,717	2,224	1,092
1977	14,936	9,248	2,645	1,965	1,078
1978	16,238	9,730	3,143	1,988	1,377
1979	17,610	10,492	3,507	2,127	1,484
1980	18,233	11,719	3,476	1,624	1,414
1981	20,891	13,908	3,505	2,186	1,292
1982	23,410	17,670	3,012	1,671	1,057
1983	23,879	19,734	2,120	1,051	974
1984 (est.).	29,636	24,670	2,260	1,472	1,234
1985 (est.).	35,210	30,541	2,024	1,411	1,234

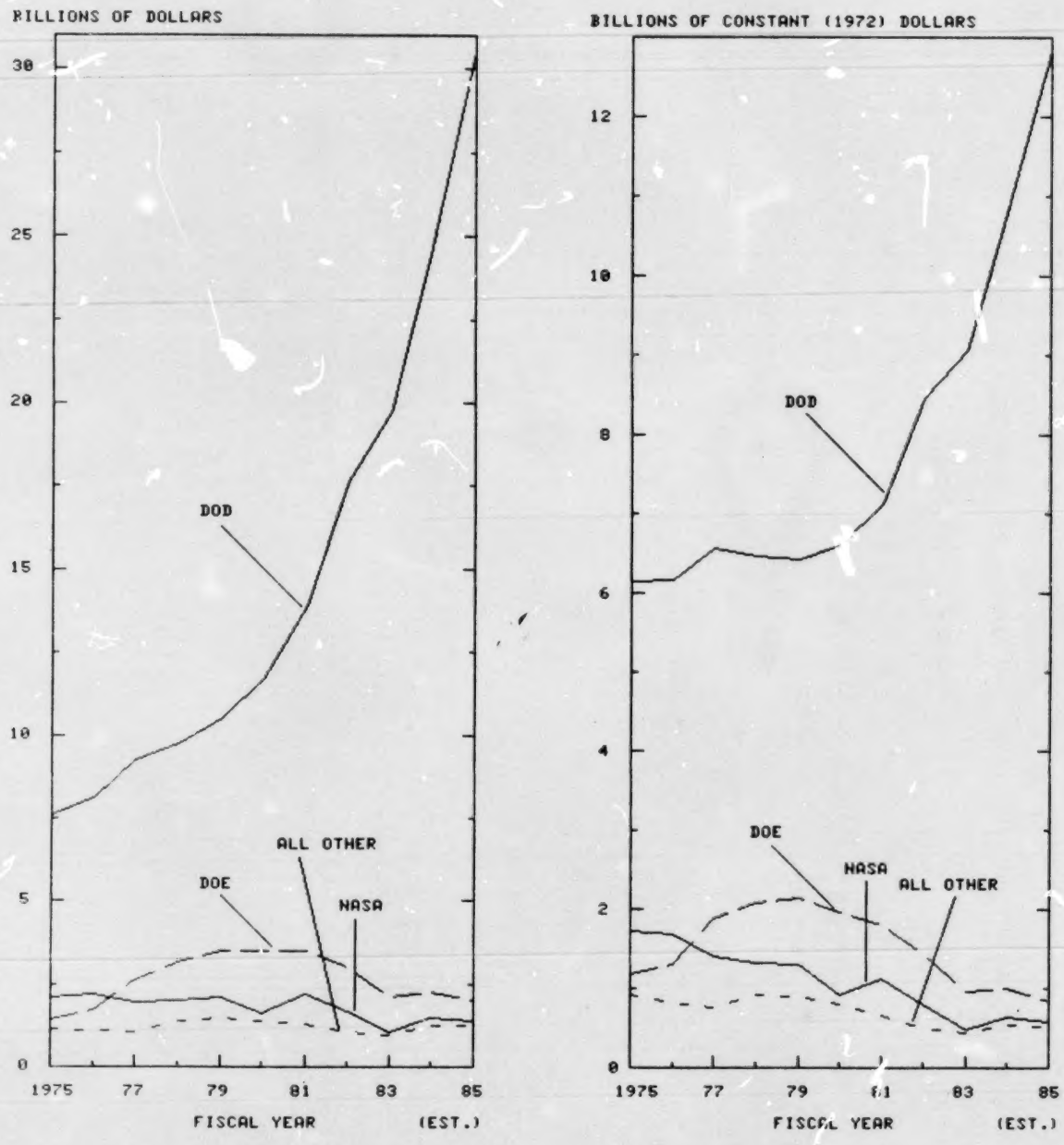
Constant (1972) dollars[1/]

1975	$ 9,983	$ 6,148	$1,179	$1,727	$ 929
1976	9,978	6,161	1,302	1,686	828
1977	10,608	6,568	1,879	1,396	766
1978	10,804	6,474	2,091	1,323	916
1979	10,771	6,417	2,145	1,301	908
1980	10,266	6,599	1,957	914	796
1981	10,713	7,132	1,797	1,121	663
1982	11,212	8,463	1,443	800	506
1983	10,964	9,061	973	483	447
1984 (est.).	13,050	10,863	995	648	543
1985 (est.).	14,782	12,822	850	592	518

1/ Based on the GNP implicit price deflator for fiscal years 1975-83 with estimates for inflation of 4.4 percent for 1984 and 4.9 percent for 1985.

Source: Division of Science Resources Studies, NSTIA

FEDERAL OBLIGATIONS FOR DEVELOPMENT, BY LEADING SUPPORT AGENCY



- o DOD, the leading supplier of Federal development funds, has more than quadrupled its support over the last decade. Most of the growth has taken place in the latter half of the period where current dollar funding has advanced at an average annual rate of 21 percent from 1980-85.

Source: Division of Science Resources Studies, NSF

Federal R&D budget authority for defense and nondefense activities: FY 1975-85

/Dollars in millions/

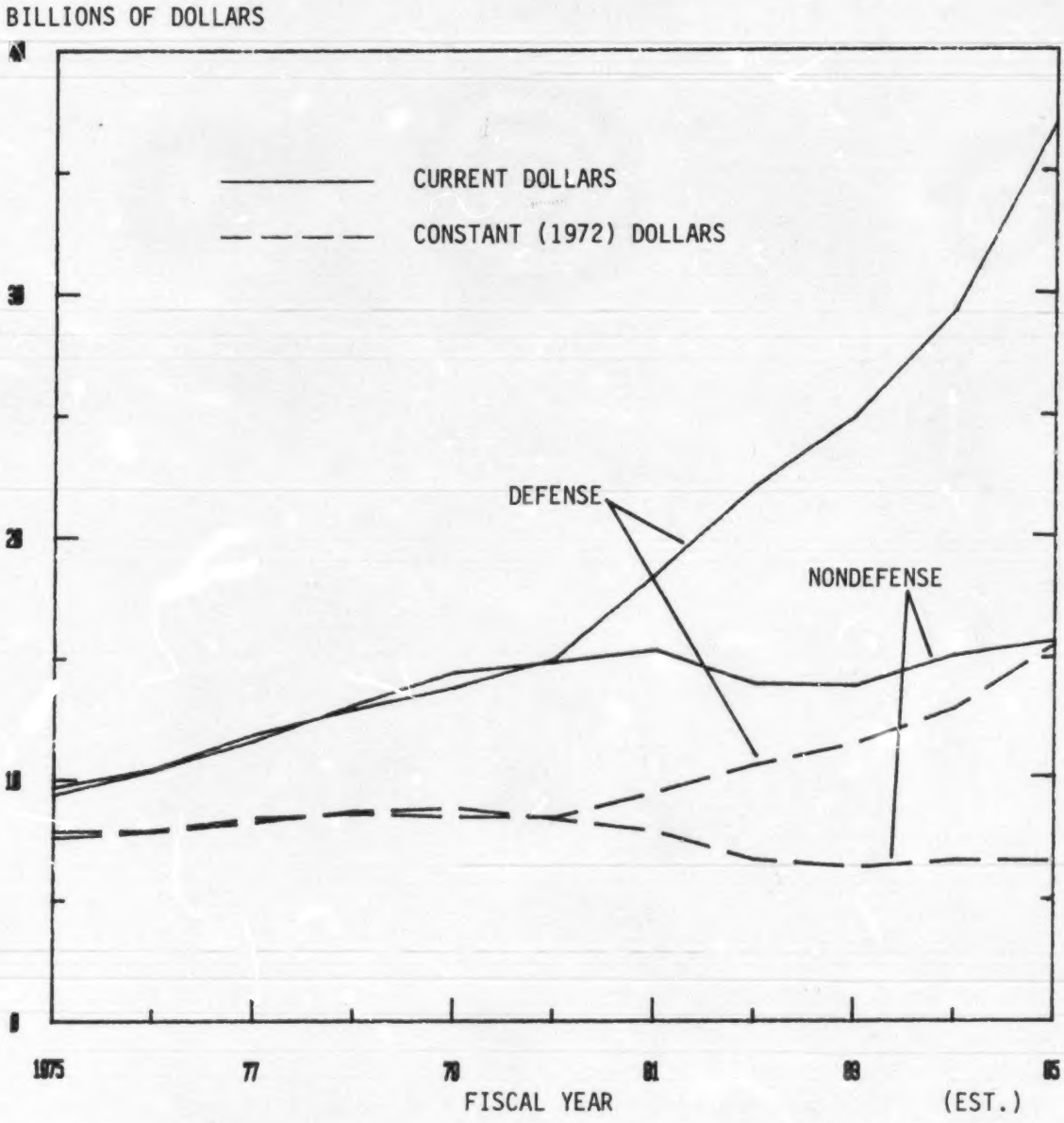
Fiscal year	Defense		Nondefense	
	Current dollars	constant (1972) dollars[1/]	Current dollars	constant (1972) dollars[1/]
1975	$ 9,679	$ 7,850	$ 9,360	$ 7,591
1976	10,430	7,908	10,350	7,847
1977	11,864	8,426	11,587	8,229
1978	12,899	8,582	13,077	8,701
1979	13,791	8,435	14,417	8,818
1980	14,946	8,416	14,826	8,348
1981	18,413	9,443	15,322	7,857
1982	22,070	10,570	14,045	6,727
1983	24,936	11,449	13,832	6,351
1984	29,275	12,891	15,090	6,645
1985	36,975	15,523	15,685	6,585

1/ Based on the GNP implicit price deflator for fiscal years 1975-83 with estimates for inflation of 4.4 percent for 1984 and 4.9 percent for 1985.

NOTE: Data presented here differ from figures which appear elsewhere in this report primarily because they are in terms of budget authority and not obligations.

Source: Division of Science Resources Studies/STIA

FEDERAL R&D BUDGET AUTHORITY FOR DEFENSE AND NONDEFENSE ACTIVITIES



- Since 1981, R&D funds for defense-related activities have more than doubled. Defense receives substantial support since it is the principal area in which the Federal government is the ultimate user of the products of its R&D efforts.

Source: Division of Science Resources Studies, NSF

Federal R&D budget authority for defense activities by character of work: FY 1975-85

(Dollars in millions)

Current dollars

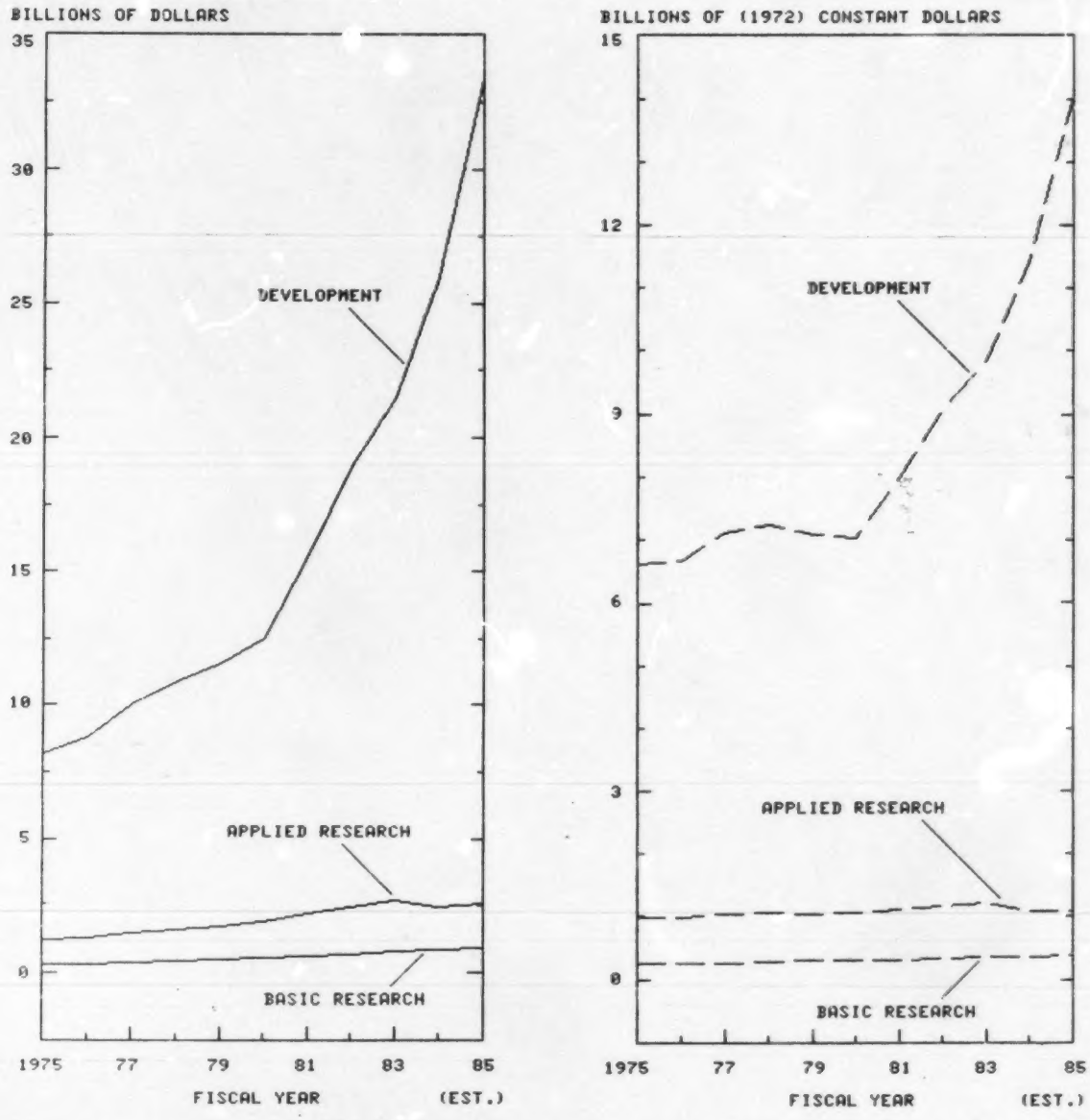
Fiscal year	Basic	Applied	Development
1975	$ 300	$1,226	$ 8,153
1976	326	1,308	8,796
1977	373	1,466	10,025
1978	426	1,594	10,880
1979	481	1,718	11,593
1980	552	1,890	12,504
1981	610	2,198	15,605
1982	696	2,439	18,935
1983	788	2,686	21,461
1984	841	2,465	25,969
1985	934	2,603	33,437
	Constant (1972) dollars[1]		
1975	243	994	6,612
1976	247	992	6,669
1977	265	1,041	7,120
1978	283	1,061	7,239
1979	294	1,051	7,091
1980	311	1,064	7,041
1981	313	1,127	8,003
1982	333	1,168	9,068
1983	362	1,233	9,854
1984	370	1,085	11,435
1985	392	1,093	14,037

1/ Based on the GNP implicit price deflator for fiscal years 1975-83 with estimates for inflation of 4.4 percent for 1984 and 4.9 percent for 1985.

NOTE: Data presented here differ from figures which appear elsewhere in this report primarily because they are in terms of budget authority and not obligations. In addition, since budget function data are not collected by character of work, these components are estimated, based on agency character of work data.

Source: Division of Science Resources Studies/STIA

FEDERAL R&D BUDGET AUTHORITY FOR DEFENSE ACTIVITIES BY CHARACTER OF WORK



- Since the development of defense systems is very hardware oriented, it is by far the largest component of defense R&D activ ties, accounting for 90 percent of the total in 1985. It has also grown more rapidly than basic or applied research, particularly during the latter half of the 1975-85 decade.

Source: Division of Science Resources Studies, NSF

Federal R&D budget authority for nondefense activities by character of work: FY 1975-85

/Dollars in millions/

Current dollars

Fiscal year	Basic	Applied	Development
1975	$2,288	$2,915	$4,156
1976	2,441	3,544	4,365
1977	2,886	3,790	4,911
1978	3,289	4,355	5,434
1979	3,722	4,629	6,066
1980	4,122	5,017	5,687
1981	4,518	5,122	5,681
1982	4,721	5,037	4,287
1983	5,459	5,232	3,142
1984	6,132	5,586	3,372
1985	6,695	5,554	3,437

Constant (1972) dollars[1]

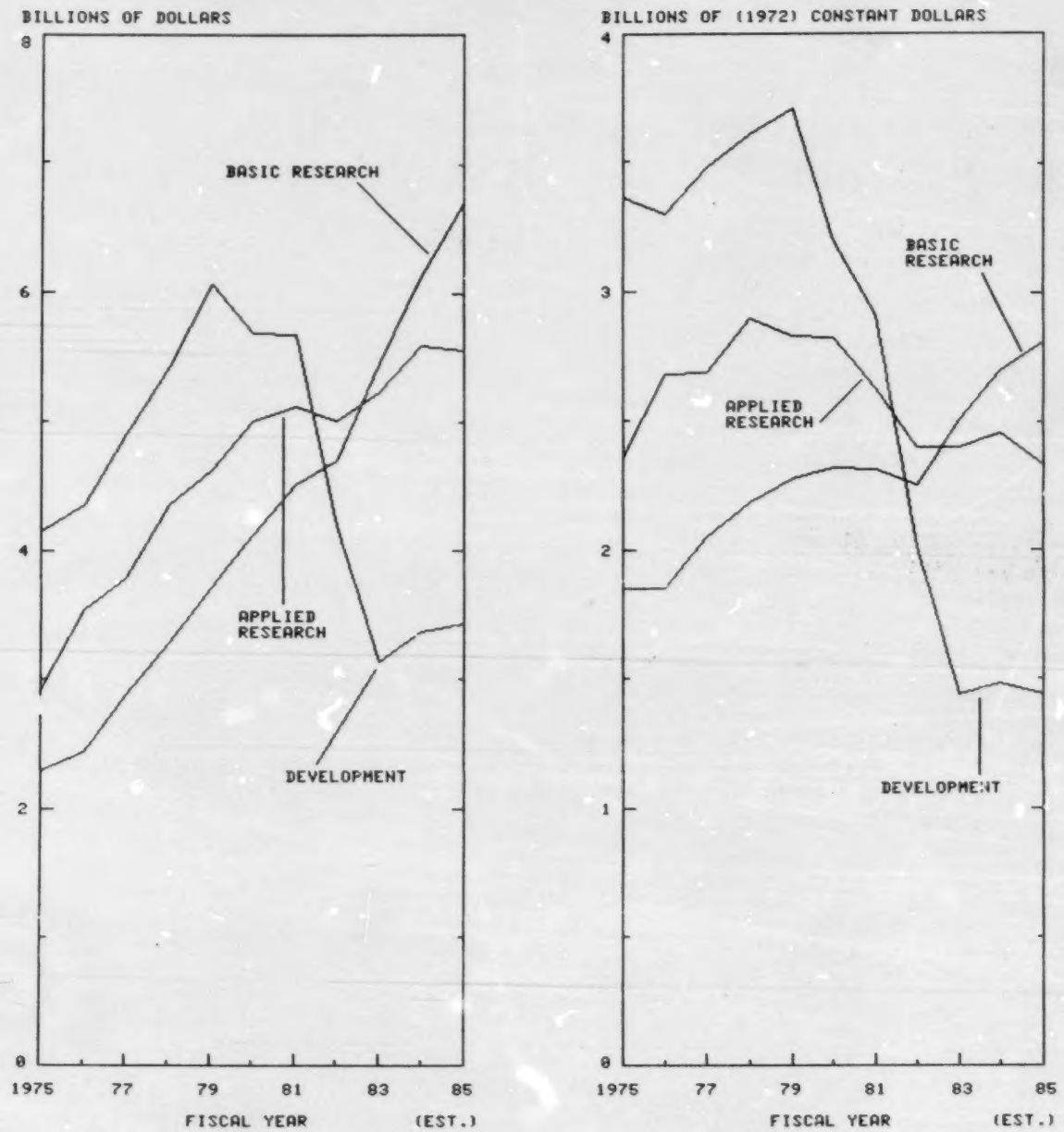
1975	$1,856	$2,364	$3,371
1976	1,851	2,687	3,309
1977	2,050	2,692	3,488
1978	2,188	2,898	3,615
1979	2,276	2,831	3,710
1980	2,321	2,825	3,202
1981	2,317	2,627	2,913
1982	2,261	2,413	2,053
1983	2,506	2,402	1,443
1984	2,700	2,460	1,485
1985	2,811	2,332	1,443

1/ Based on the GNP implicit price deflator for fiscal years 1975-83 with estimates for inflation of 4.4 percent for 1984 and 4.9 percent for 1985.

NOTE: Data presented here differ from figures which appear elsewhere in this report primarily because they are in terms of budget authority and not obligations. In addition, since budget function data are not collected by character of work, these components are estimated, based on agency character of work data.

Source: Division of Science Resources Studies/STIA

FEDERAL R&D BUDGET AUTHORITY FOR NONDEFENSE ACTIVITIES BY CHARACTER OF WORK



- Nondefense basic research, supported by the Federal government principally to produce a knowledge base to provide for the Nation's long-term welfare, has grown dramatically since 1975. The 1985 level is nearly triple that of 1975. For the first time in 1983, but also in subsequent years, nondefense basic research funding exceeds that for the other nondefense R&D components.

Source: Division of Science Resources Studies, NSF

Federal R&D obligations to universities and colleges: FY 1975-85

/Dollars in millions/

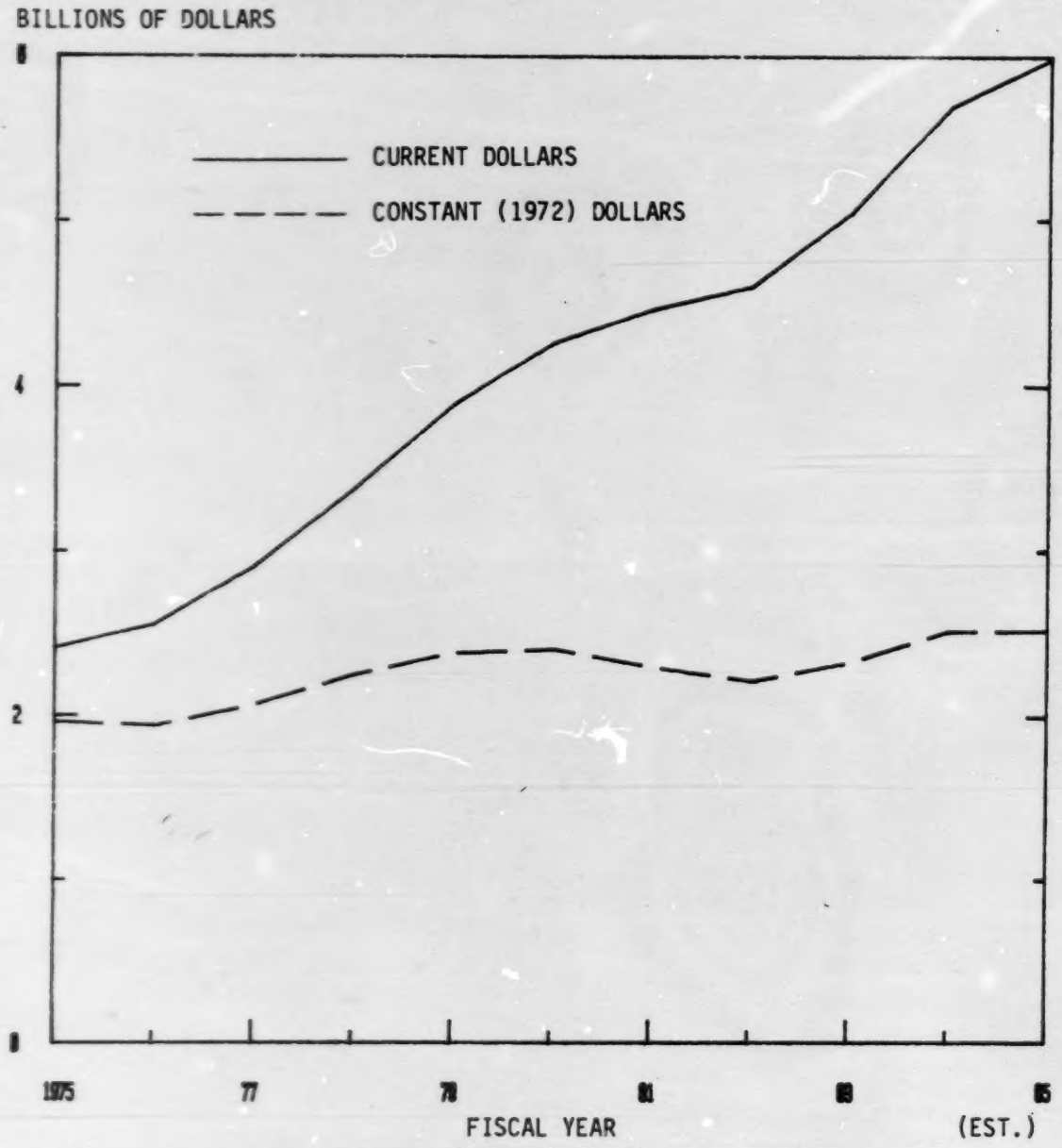
Fiscal Year	Current dollars	Constant (1972) dollars[1]
1975	$ 2,411	$ 1,955
1976	2,552	1,935
1977	2,905	2,063
1978	3,375	2,246
1979	3,889	2,379
1980	4,263	2,400
1981	4,466	2,290
1982	4,605	2,205
1983	5,054	2,320
1984 (est.)	5,695	2,508
1985 (est.)	5,984	2,512

1/ Based on the GNP implicit price deflator for fiscal years 1975-83 with estimates for inflation of 4.4 percent for 1984 and 4.9 percent for 1985.

Source: Division of Science Resources Studies, STIA

Note: Only R&D data for university and college performers are provided to OMB in conjunction with the agencies' overall budget submissions, therefore data on basic research at universities and colleges which appear in subsequent tables are estimated.

FEDERAL R&D OBLIGATIONS TO UNIVERSITIES AND COLLEGES



- Federal R&D obligations to universities and colleges have grown steadily in recent years with an average annual growth of approximately 9 percent since 1982, nearly equal to the growth rate recorded between 1975 and 1982. In constant dollars, 1985 remains essentially level at the peak set the previous year.

Source: Division of Science Resources Studies, NSF

Federal R&D obligations to universities and colleges by major support agency: FY 1975-85
/Dollars in millions/

Current dollars

Fiscal year	Total	HHS[1/]	NSF	DOD	DOE	USDA	NASA	All other
1975	$2,411	$1,254	$ 435	$ 203	$ 132	$ 108	$ 108	$ 171
1976	2,552	1,326	437	240	145	120	119	165
1977	2,905	1,476	511	273	188	140	117	200
1978	3,375	1,664	537	383	240	186	127	238
1979	3,889	1,942	617	438	260	200	138	294
1980	4,263	2,076	685	495	285	216	158	348
1981	4,466	2,185	702	573	301	243	172	290
1982	4,605	2,176	715	664	277	255	186	332
1983	5,054	2,448	787	778	307	274	189	271
1984 (est.).	5,695	2,757	931	890	324	281	210	302
1985 (est.).	5,984	2,820	1,068	992	345	299	235	225

Constant (1972) dollars[2/]

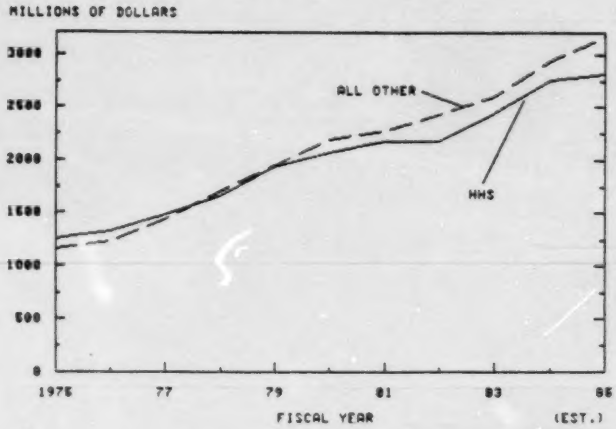
1975	$1,955	$1,017	$ 353	$ 165	$ 107	$ 87	$ 87	$ 139
1976	1,935	1,005	331	182	110	91	90	125
1977	2,063	1,048	363	194	134	99	83	142
1978	2,246	1,107	357	255	160	124	84	158
1979	2,379	1,188	377	268	159	122	84	180
1980	2,400	1,169	386	279	160	122	89	196
1981	2,290	1,121	360	294	154	125	88	149
1982	2,205	1,042	342	318	133	122	89	159
1983	2,320	1,124	361	357	141	126	87	124
1984 (est.).	2,508	1,214	410	392	143	124	92	133
1985 (est.).	2,512	1,184	448	416	145	126	99	94

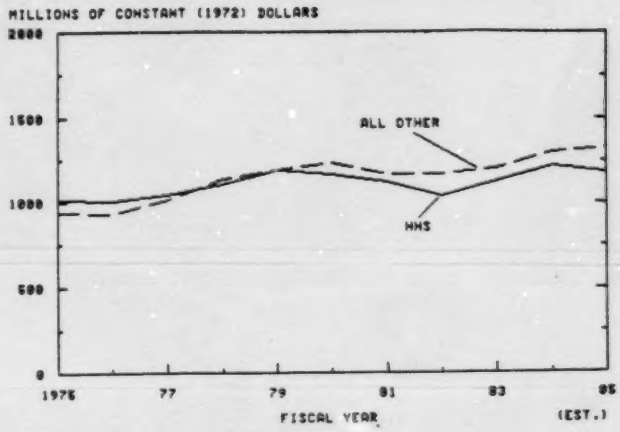
1/ Prior to 1979 HEW data were used minus data for the Office of Education, National Institute of Education, and Assistant Secretary for Education (HEW).
2/ Based on the GNP implicit price deflator for fiscal years 1975-83 with estimates for inflation of 4.4 percent for 1984 and 4.9 percent for 1985.

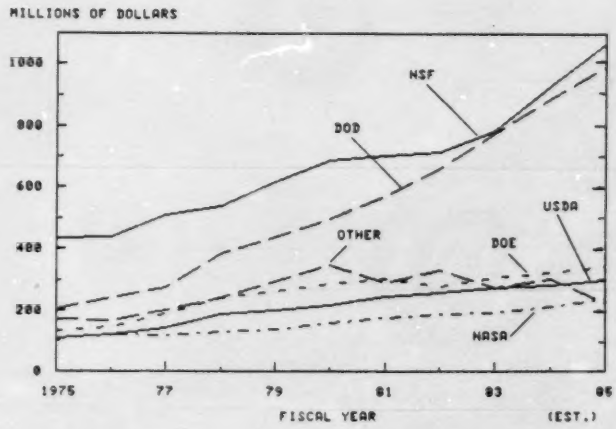
Source: Division of Science Resources Studies/STIA

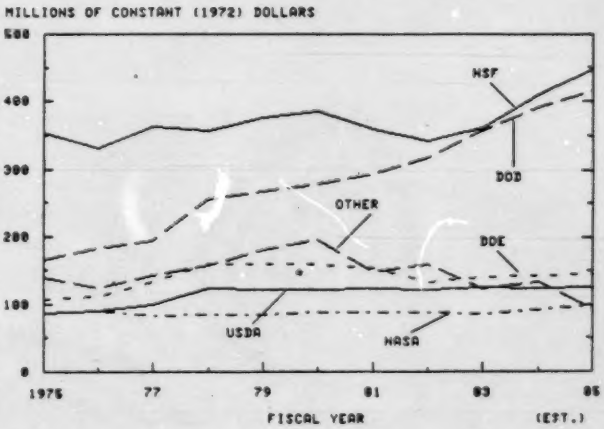
Note: Only R&D data for university and college performers are provided to OMB in conjuction with the agencies' overall budget submissions, therefore data on basic research at universities and colleges which appear in subsequent tables are estimated.

FEDERAL R&D OBLIGATIONS TO UNIVERSITIES AND COLLEGES, BY LEADING SUPPORT AGENCY









- HHS continues to provide the most support for R&D to universities and colleges, but NSF and DOD show higher growth rates. The latter two agencies have increased their R&D funds to academia by nearly 50 percent since 1982. Over the last decade, constant dollar support by DOD almost tripled, while NSF and HHS funds increased one quarter and 16 percent, respectively.

Source: Division of Science Resources Studies, NSF

Federal obligations for basic research to universities and colleges

/Dollars in millions/

Fiscal year	Current dollars	Constant (1972) dollars[1/]
1975	$ 1,261	$ 1,023
1976	1,342	1,017
1977	1,555	1,104
1978	1,759	1,170
1979	2,080	1,272
1980	2,320	1,306
1981	2,503	1,284
1982	2,727	1,306
1983	3,052	1,401
1984 (est.)	3,560	1,568
1985 (est.)[2]	3,830	1,608
1985 (est.)[2]	3,931	1,650

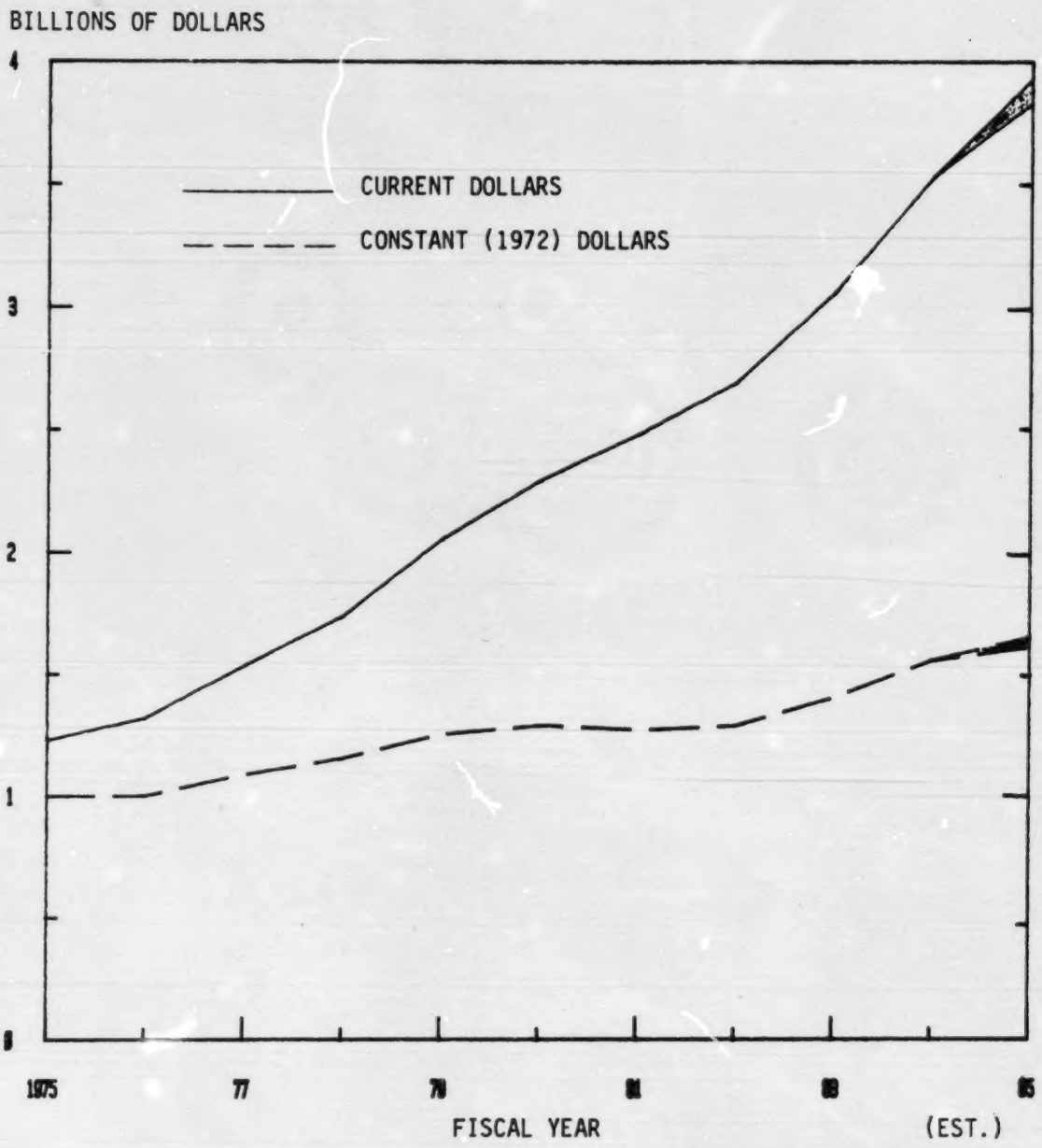
1/ Based on the GNP implicit price deflator for fiscal years 1975-83 with estimates for inflation of 4.4 percent for 1984 and 4.9 percent for 1985.

2/ Data for 1985 reflect possible range of funding levels based on historical variations in agencies' relative share of basic research funds to academia as a fraction of their R&D support to academia.

NOTE: Data for 1983-85 are estimates based on information provided to OMB in conjunction with the President's 1985 budget.

Source: Division of Science Resources Studies, STIA

FEDERAL OBLIGATIONS FOR BASIC RESEARCH TO UNIVERSITIES AND COLLEGES



DATA FOR 1985 REFLECT NSF ESTIMATES OF THE POSSIBLE RANGE OF FUNDING LEVELS.

- Obligations for basic research at universities and colleges are expected to show continued growth in 1985 (8-10 percent), following a substantial increase in the previous year. Since 1981, Federal basic research funds to academia have grown approximately 55 percent.

Source: Division of Science Resources Studies, NSF

Federal obligations for basic research to universities and colleges by agency: FY 1975-85
[Dollars in millions]

Current dollars

Fiscal year	Total	HHS[1]	NSF	DOD	Energy	NASA	All other
1975	$1,261	$580	$379	$105	$ 58	$64	$75
1976	1,342	634	392	112	68	67	69
1977	1,555	719	475	142	71	72	76
1978	1,759	817	502	168	86	88	98
1979	2,080	1,021	574	179	97	97	112
1980	2,320	1,121	643	208	116	113	119
1981	2,503	1,206	668	244	134	124	127
1982	2,727	1,345	674	305	135	126	142
1983	3,052	1,527	740	354	176	124	131
1984 (est.).	3,560	1,742	897	428	201	139	153
1985 (est.)[2]	3,830	1,796	1,021	474	241	152	146
1985 (est.)[2]	3,931	1,889	1,025	486	231	153	146

Constant (1972) dollars[3]

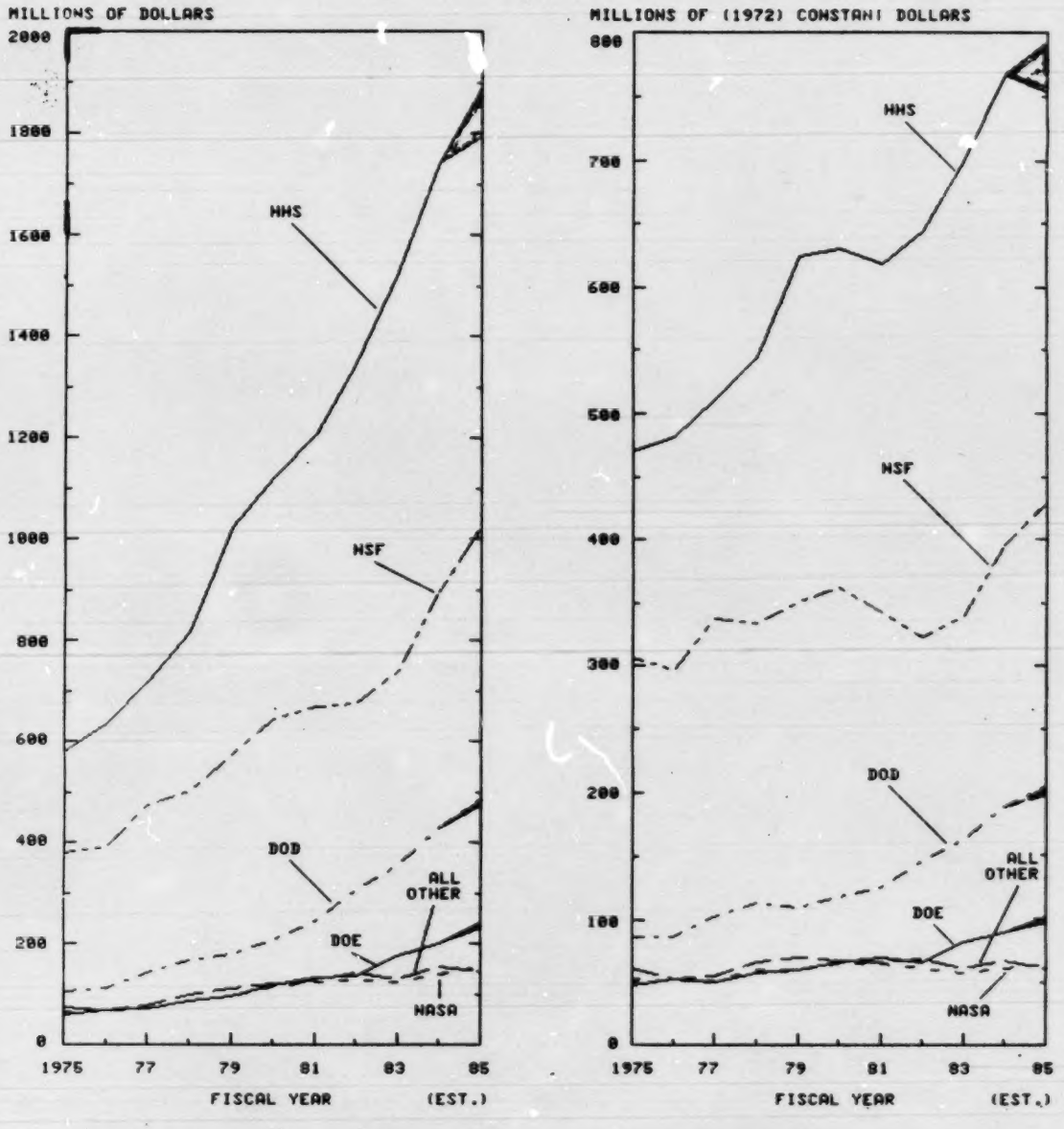
1975	1,023	470	307	85	47	52	61
1976	1,017	481	297	85	52	51	52
1977	1,104	511	337	101	50	51	54
1978	1,170	544	334	112	57	59	65
1979	1,272	624	351	109	59	59	69
1980	1,306	631	362	117	65	64	67
1981	1,284	618	343	125	69	64	65
1982	1,306	644	323	146	65	60	68
1983	1,401	701	340	163	81	57	60
1984 (est.).	1,568	767	395	188	89	61	67
1985 (est.)[2]	1,608	754	429	199	101	64	61
1985 (est.)[2]	1,650	793	430	204	97	64	61

1/ Prior to 1979 HEW data were used minus data for the Office of Education, National Institute of Education, and Assistant Secretary for Education (HEW).
2/ Data for 1985 reflect possible range of funding levels based on historical variations in agencies' relative share of basic research funds to academia as a fraction of their R&D support to academia.
3/ Based on the GNP implicit price deflator for fiscal years 1975-83 with estimates for inflation of 4.4 percent for 1984 and 4.9 percent for 1985.

NOTE: Data for 1983-85 are estimates based on information provided to OMB in conjunction with the President's 1985 budget.

Source: Division of Science Resources Studies, STIA

FEDERAL OBLIGATIONS FOR BASIC RESEARCH TO UNIVERSITIES AND COLLEGES, BY LEADING SUPPORT AGENCY



DATA FOR 1985 REFLECT NSF ESTIMATES OF THE POSSIBLE RANGE OF FUNDING LEVELS.

- o HHS, the leading supplier of Federal funds for basic research to universities and colleges is expected to continue its pattern of increased support (3 to 8 percent) to this sector in 1985, although at a rate somewhat slower than the 14 percent growth shown in 1984. NSF, the next largest basic research support agency is expected to substantially increase (14%) its funding to academia--since 1983 support by this agency has advanced an average of nearly 18 percent per year.

Source: Division of Science Resources Studies, NSF

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